**4 .DETAILED DESIGN**

**4.1 Introduction :**

During detailed design, the internal logic of each modules specified in system design is decided. During this phase further details of the modules are decided. Design of each of the modules usually specified in a high level description language which is independent of the language in which software eventually be implemented.

**4.2 Structure of software package :**

**Digital File manipulation**

CSV To TEXT

Extracting text from video

XLS To TEXT

Text manipulation in an Image

Spread Sheet Manipulation

Video-Audio Manipulation

File Manipulation

Extracting text from Images

Extracting text from Region of interest

Highlighting text

XLS To CSV

Extracting audio from video

Extracting text from audio

PDF to TEXT

DOCX to TEXT

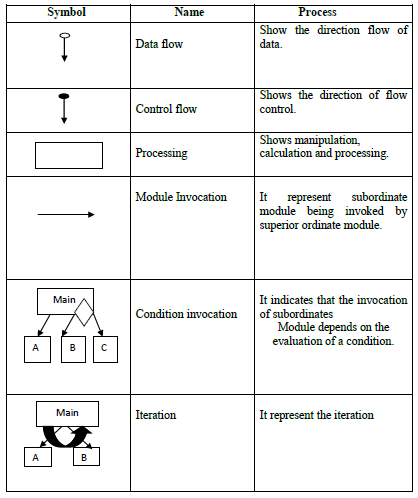
Pdf to Docx

Search Column

TEXT to DOCX

**4.3 Module decomposition of software :**

**Structure chart:**

Structure chart is a top-down modular design, consist of squares representing different models in a system and lines .Structure chart shows how program has been partitioned into manageable modules hierarchy and organization of those modules and communicational interface. 

**Flow chart :**

Flow chart is a graphical representation of solution to the given problems. A Flowchart is pictorial representation of an algorithm, workflow or process. The diagrammatic representation illustrates a solution model to given problem. It uses the following symbol.

|  |  |  |
| --- | --- | --- |
| **Symbol** | **Name** | **Purpose** |
|  | Terminator | It indicates the start and end process |
|  | Input/Output | Input/Output data. |
|  | Decision | It represents a comparison or question that determines an alternate path to be followed. |
|  | Flow direction | Shows the direction of data flow. |
|  | Processing | It represents manipulation, calculation, or information processing. |
|  | Direction access storage | File storage. |
|  | Preparation(Looping) | An instruction or group of instruction. |
|  | In-page |  |
|  | Off-page |  |
|  | Delay |  |

**4.3.1 Text manipulation:**

**4.3.1.1 Extracting Text from image:**

**4.3.1.1.1 Input:**

Single Image with jpg, jpeg, png, webp format from disk.

**4.3.1.2 Procedural details:**

**Flow Chart:**

Read Image File

start

Save the text file

Display the path of text file

stop

Extracting Text from image

disk

**4.3.1.1.3 File I/O interfaces**

Not applicable

**4.3.1.1.4 Outputs**

**Extracted text file.**

**4.3.1.1.5 Implementation aspects**

Not applicable.

**4.3.1.2 Extracting Region of interest:**

**4.3.1.2.1 Input:**

Single Image with jpg, jpeg, png, webp format from disk.

**4.3.1.2.2 Procedural details:**

Read Image File

start

Save the text file

Display the path of text file

stop

Extracting region of interest

disk

**Flow Chart**

**4.3.1.2.3 File I/O interfaces**

Not applicable

**4.3.1.2.4 Outputs**

**Extracted text file.**

**4.3.1.2.5 Implementation aspects**

Not applicable.

**4.3.1.3 Highlighting text from Image:**

**4.3.1.3.1 Input:**

Single Image with jpg, jpeg, png, webp format from disk.

**4.3.1.3.2 Procedural details:**

**Flow Chart:**

Read Image File

start

Save the text file

Display the path of text file

stop

Highlighting text from image

disk

**4.3.1.3.3 File I/O interfaces**

Not applicable

**4.3.1.3.4 Outputs**

Extracted text file.

**4.3.1.3.5 Implementation aspects**

Not applicable.

**4.3.2. Spreadsheet manipulation:**

**4.3.2.1 CSV to TEXT:**

**4.3.2.1.1 Input:**

Single .csv format file from disk.

**4.3.2.1.2 Procedural details:**

**Flow chart:**

Read CSV File

start

Save the text file

Display the path of text file

stop

CSV to TEXT

disk

**4.3.2.1.3 File I/O interfaces**

Not applicable

**4.3.2.1.4 Outputs**

Extracted text file from csv file.

**4.3.2.1.5 Implementation aspects**

Not applicable.

**4.3.2.2 XLS to TEXT:**

**4.3.2.2.1 Input:**

Single .xlsx format file from disk.

**4.3.2.2.2 Procedural details:**

**Flow chart:**

Read XLSX File

start

Save the text file

Display the path of text file

stop

XLSX to TEXT

disk

**4.3.2.2.3 File I/O interfaces**

Not applicable

**4.3.2.2.4 Outputs**

Extracted text file from xlsx file.

**4.3.2.2.5 Implementation aspects**

Not applicable

**4.3.2.3 XLS to CSV:**

**4.3.2.3.1 Input:**

Single .xlsx format file from disk.

**4.3.2.3.2 Procedural details:**

**Flow chart:**

Read XLSX File

start

Save the csv file

Display the path of csv file

stop

XLSX to CSV

disk

**4.3.2.3.3 File I/O interfaces**

Not applicable

**4.3.2.3.4 Outputs**

Extracted csv file from xlsx file.

**4.3.2.3.5 Implementation aspects**

Not applicable

**4.3.2.4 Search Column:**

**4.3.2.4.1 Input:**

Single .xlsx format file from disk.

**4.3.2.4.2 Procedural details:**

**Flow chart:**

Read XLSX File

start

Save the xlsx file with search columns.

Display the path of xlsx file

stop

SEARCH COLUMN

disk

**4.3.2.4.3 File I/O interfaces**

Not applicable

**4.3.2.4.4 Outputs**

Saved xlsx file with searched columns.

**4.3.2.4.5 Implementation aspects**

Not applicable

**4.3.3. Audio and Video manipulation:**

**4.3.3.1 Extracting audio from Video :**

**4.3.2.1.1 Input**:

Single video file from disk.

**4.3.2.1.2 Procedural details:**

**Algorithm:**

Step 1: start

Step 2: input video file

Step 3: extracting the audio from video

Step 4: save the audio file to disk

Step 5: display the path of stored audio file

Step 6: stop

**4.3.2.1.3 File I/O interfaces**

Not applicable

**4.3.2.1.4 Outputs**

Extracted audio file from video..

**4.3.2.1.5 Implementation aspects**

Not applicable

**4.3.3.2 Extracting text from Video :**

**4.3.2.2.1 Input**:

Single video file from disk.

**4.3.2.2.2 Procedural details:**

**Algorithm:**

Step 1: start

Step 2: input video file

Step 3: extracting the text from video

Step 4: save the text file to disk

Step 5: display the path of stored text file

Step 6: stop

**4.3.2.2.3 File I/O interfaces**

Not applicable

**4.3.2.2.4 Outputs**

Extracted audio file from video..

**4.3.2.2.5 Implementation aspects**

Not applicable

**4.3.3.3 Extracting text from audio :**

**4.3.3.1.1 Input**:

Single audio file from disk.

**4.3.3.1.2 Procedural details:**

**Algorithm:**

Step 1: start

Step 2: input audio file

Step 3: extracting the text from audio

¿ Step 4: save the text file to disk

Step 5: display the path of stored text file

Step 6: stop

**4.3.3.1.3 File I/O interfaces**

Not applicable

**4.3.3.1.4 Outputs**

Extracted audio file from video..

**4.3.3.1.5 Implementation aspects**

Not applicable

**4.3.4 File Manipulation**

**4.3.4.1 PDF TO TEXT :**

**4.3.4.1.1 Input**:

User provide the single pdf file from disk.

**4.3.4.1.2 Procedural details:**

**Structure Chart:**

USER

Read the pdf file

PDF TO TEXT

SAVE THE TEXT FILE

DISK

DISPLAY THE PATH OF FILE

**4.3.4.1.3 File I/O interfaces**

Not applicable

**4.3.4.1.4 Outputs**

Converted text file from pdf file

**4.3.4.1.5 Implementation aspects**

Not applicable

**4.3.4.2 DOCX TO TEXT :**

**4.3.4.2.1 Input**:

User provide the single DOCX file..

**4.3.4.2.2 Procedural details:**

**Structure Chart:**

USER

Read the pdf file

DOCX TO TEXT

SAVE THE TEXT FILE

DISK

DISPLAY THE PATH OF FILE

**4.3.4.2.3 File I/O interfaces**

Not applicable

**4.3.4.2.4 Outputs**

Converted text file from docx file

**4.3.4.2.5 Implementation aspects**

Not applicable

**4.3.4.3 Pdf to Docx:**

**4.3.4.3 .1 Input**:

User provide the single Pdf file..

**4.3.4.3.2 Procedural details:**

**Structure Chart:**

USER

Read the pdf file

Pdf to Docx

SAVE THE TEXT FILE

DISK

DISPLAY THE PATH OF FILE

**4.3.4.3.3 File I/O interfaces**

Not applicable

**4.3.4.3.4 Outputs**

Converted Docx file from Pdf file.

**4.3.4.3.5 Implementation aspects**

Not applicable

**4.3.4.4 TEXT TO DOCX :**

**4.3.4.4 .1 Input**:

User provide the single Text file..

**4.3.4.4.2 Procedural details:**

USER

Read the pdf file

TEXT TO DOCX

SAVE THE TEXT FILE

DISK

DISPLAY THE PATH OF FILE

**4.3.4.4.3 File I/O interfaces**

Not applicable

**4.3.4.4.4 Outputs**

Converted docx file from text file.

**4.3.4.4.5 Implementation aspects**

Not applicable